REMARKS

Applicant thanks the Examiner for an acknowledgment of a claim for foreign priority under 35 U.S.C. §119(a)-(d) and indication that copies of certified documents have been received by the Office.

The indication that drawings filed on May 23, 2001, have been accepted by the Office, also noted with appreciation.

The Examiner objected claims 1 and 4 to 6 for the number of informalities. Responding to the Examiner objections Claims 1, 4, 5 and 6 have been amended to eliminate the informalities pointed out by the Examiner. Specifically, in claim 1 the recitations "the Internet Operating"(line 3) and "an IP packet" (line 8) have been replaced with "a network operating" and "the IP packet" respectively. In claim 4, the recitations "an IP packet" (line 3), "a terminal" (line 4), "a server" (line 4), and "a router" (line 6) have been replaced with "the IP packet", "the terminal", "the server" and "the router" accordingly. Analogously, in claim 5, the recitations "an IP packet" (line 3) and "a terminal" (line 3) have been changed to "the IP packet" and "the terminal". In the claim 6, the recitations "an IP packet" (line 2) has been replaced with " the IP packet" and "a server" (line 3) has been changed to "the server".

The specification has been carefully reviewed and amended in order to add the definitions for the acronyms ""QoS" and "TCP/UDP" appearing in the specification and claims. Specifically, the definition of "QoS" is "Quality of Service" and "TCP/UDP" is Transmission Control Protocol/User Diagram Protocol, as set out on pages 583, 708 and 752, respectively, of *Newton's Telecom Dictionary* by Harry Newton, 14th Ed., Telecom Books & Flatiron Publishing (1998). Copies of the cited pages are attached. No new matter is added by this amendment.

Claims 1 to 9 are currently active in the application. By the present amendment claims 1, 3 - 6 have been amended and claims 7 to 9 have been added for the Examiner's consideration. Specifically, claim 1 has been amended in order to highlight the specific features of the present invention and newly added claims

7 to 9 are related to the method. The support for this amendments is provided at least on Figure 1 and pages 5 to 7 of the specification. Additionally, Applicant replaced the term "Internet" in all the claims with a term "network". The definitions of acronyms "IP", "QoS", "API", and "TCP/UDP" have been added in the claim language as they are presented in the specification. The reconsideration of claims is respectfully requested.

Claims 1, 4, and 6 have been rejected under 35 U.S.C. §102(b) as being anticipated by Jani Kiiskinen et al. (*"Data Channel Service for Wireless Telephone Links"*, 01-1996, Department of Computer Science of Helsinki, Series of Publications C, Report C-1996-1). This rejection is respectfully traversed in a view of the present amendment.

The present invention aims to resolve the several problems of the conventional Internet Protocol packet priority control systems. Specifically, in the IP networks, image data is frequently handled steadily for browsing Web pages with browsers. The image data usually included in an HTTP transaction which is likely substantially occupy a communication band. Thus, control information vulnerable to delay and sound data requiring real time processing shows data delay, fluctuations, data loss and the like on the networks due to the occupation of the communication band by the image data. These effects take place on wired networks in WAN (Wide Area Network) lines for connecting LANs (Local Area Network) due to the fact that WAN line cannot ensure a sufficient band. The common practice to reduce a negative effects of the insufficient band is to put high priority on control information with QoS control in a router connected to an exit or the WAN line. However, this practice significantly reduces a transmission speed. Therefore, the Applicant proposes to improve communication without affecting the speed of transmission by assigning a priority of each session not in a router on a port-by -port basis but in a terminal or in a sever, setting on a session-by-session basis, and further passing it to a standard API (Application Programming Interface). Such approach gives several advantages for the system wireless network: first, there is no need to mount a CPU of high performance on

the cellular phone and second there is also no need to use Differentiated Services due to the fact that a priority setting is realized on an session-by-session basis.

The reference to Kiiskinen et al. proposes to replace a standard TCP/IP application, which performs poorly in an environment where wireless and wired telephone links are combined, with a communication architecture for the efficient operation over network consisting of fixed networks and wireless telephone network. According to Kiiskinen et al. the standard TCP/IP is transparently replaced with a special transport service MDCS (Mowgli Data Channel Service). The MDCS is designed to cope with the specific features of the cellular links like long latencies, narrow bandwidth, highly variable transmission delays, and sudden disconnection. The MDCS allows an efficient use of the limited bandwidth by providing multiplexing and priority based scheduling of data channels over the wireless link. As a result MDCS improves the fault tolerance and performance of communication over wireless telephone links.

In the Office Action the Examiner erroneously equates the claimed invention with the system to Kiiskinen et al. MDCS (Mowgli Data Channel Service). As it was pointed out above, the MDCS architecture has been designed to replace TCP/UDP and there are a lot of differences between the claimed invention and MDCS, which are highlighted through all article by Kiiskinen et al. First of all, the difference between the conventional TCP/UDP system and the present invention is clearly shown in Figure 1. As it can be seen from Figure 1, the claimed invention the QoS priority 502 replaces conventional QoS Priority 501. The reference to Kiiskinen in it's turn specifies a number of differences between MDCS and conventional TCP/IP. For instance, in chapter 3.1 of the reference, Kiiskinen et al. state, " ...the MDCS offers bidirectional data channels for data transfer over the wireless link. Data channels can be opened as stream channels providing TCP-like functionality or as message channels if UDP-like datagram service is desired. However, the message channels differ from UDP in that the delivery of the messages is reliable between the mobile and the MCH." Furthermore, in chapter 4.5 of the article Kiiskinen et al. points out, " MDCS-

clients can request the MDCS to give a notification with a signal or message when the wireless link is disconnected. This allows them to adapt to the changed connectivity in many cases enabling the user to continue working in disconnected mode. However, old TCP/IP applications are completely isolated from the knowledge of unexpected disconnections. The MDCS may automatically try to re-establish the broken wireless connection." Generally, the author of the article is not satisfied with a standard TCP/IP performance in the situation when wireless telephone links are combined with wire-line links and replaces it with a new system, having characteristics different from the TCP/UDP. THE MDCS cannot be equated with TCP/UDP, on which the claimed invention is focused. The Applicant tends to improve the performance of TCP/UDP system by changing the location of the prioritization and style of the prioritization. In order to emphasize the distinctions claim 1 has been amended. Particularly, as amended claim 1 now recites, "An IP (Internet Protocol) packet priority control system which performs priority control on a session-by-session basis by distributing load to hardware to enable communication without interference between images and control information comprising:

~~the Internet~~ a network, operating under program control;

a terminal, a server, and a router connected to said ~~Internet~~ network; and

means for a Quality of Service (QoS) setting priority in an IP packet on a session-by-session basis located in the terminal or the server which adds a priority parameter passing to a standard Application Programming Interface (API), and

wherein said priority parameter including priority information, a port number and IP address from an application with a higher priority on control information vulnerable to delay than image data, and

wherein the IP packet is transmitted and received under priority control among said terminal, said server, and said router." (Emphasis added)

As amended, it is respectfully submitted that claim 1 clearly defines over the article to Kiiskinen et al. The claims 4 and 6 depend from currently amended claim1 and therefore are allowable. The reconsideration of the amended and newly

added method claims is respectfully requested.

Claims 2-3 have been rejected under 35 U.S.C. §103(a) as being unpatentable over the article to Kiiskinen et al. in view of U.S. Patent 6,141,686 to Jackowski et al. This rejection is respectfully traversed in a view of the present amendment.

The reference to Kiiskinen et al. has been distinguished above. The Examiner relies on the patent to Jakcowski et al. as showing JAVA applet, which is not shown by the primary reference. However, as it was discussed above claim 1 as amended clearly defines over Kiiskinen et al. and claims 2 and 3 are dependent from the claim 1 and therefore are allowable.

Claim 5 has been rejected under 35 U.S.C. §103(a) as being unpatentable over the article to Kiiskinen et al. in view of Markku Kojo et al. article *Connecting Mobile Workstations to the Internet over a Digital Cellular Telephone Network*, 09-1994, Department of Computer Science of University of Helsinki, Series of Publications C, Report C-1994-39. This rejection is respectfully traversed based on the present amendment.

The Examiner relies on the article to Kojo as presenting TCP/IP-based communication architecture. The Examiner states that it would be obvious to the person of ordinary skill in the art to combine Kojo and Kiiskinen et al. The Applicant respectfully disagrees with this statement, for the reason that Kiiskinen et al. clearly states the intention to get rid from TCP/IP communication architecture and replaces it with the new system. Additionally, Kojo proposes to improve TCP/IP performance by introducing a mediating interceptor or so-called Mobile-Connection Host, the structure which is not shown by the claimed invention. The Examiner has taken two rather diverse systems and tried to combine them based on Applicant's own disclosure. It is not even clear that the reconstruction would result in an operable system, particularly since the reference are each based on different principles of operation. The rejection is clearly without merit and should therefore be withdrawn.

For the reason advanced, it is respectfully submitted that claims 1 to 9

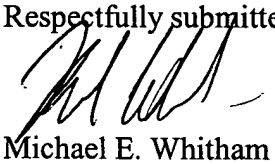
clearly define over the prior art relied on by the Examiner. The prior art cited but not relied on by the Examiner has been reviewed, but for the reason already advanced, that prior art is similarly not relevant to the invention as now claimed.

In view of the foregoing, it is respectfully requested that the application be reconsidered, that claims 1 to 9 be allowed, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any fees for such provisional petition and any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041 (Whitham, Curtis & Christofferson, P.C.).

Respectfully submitted,



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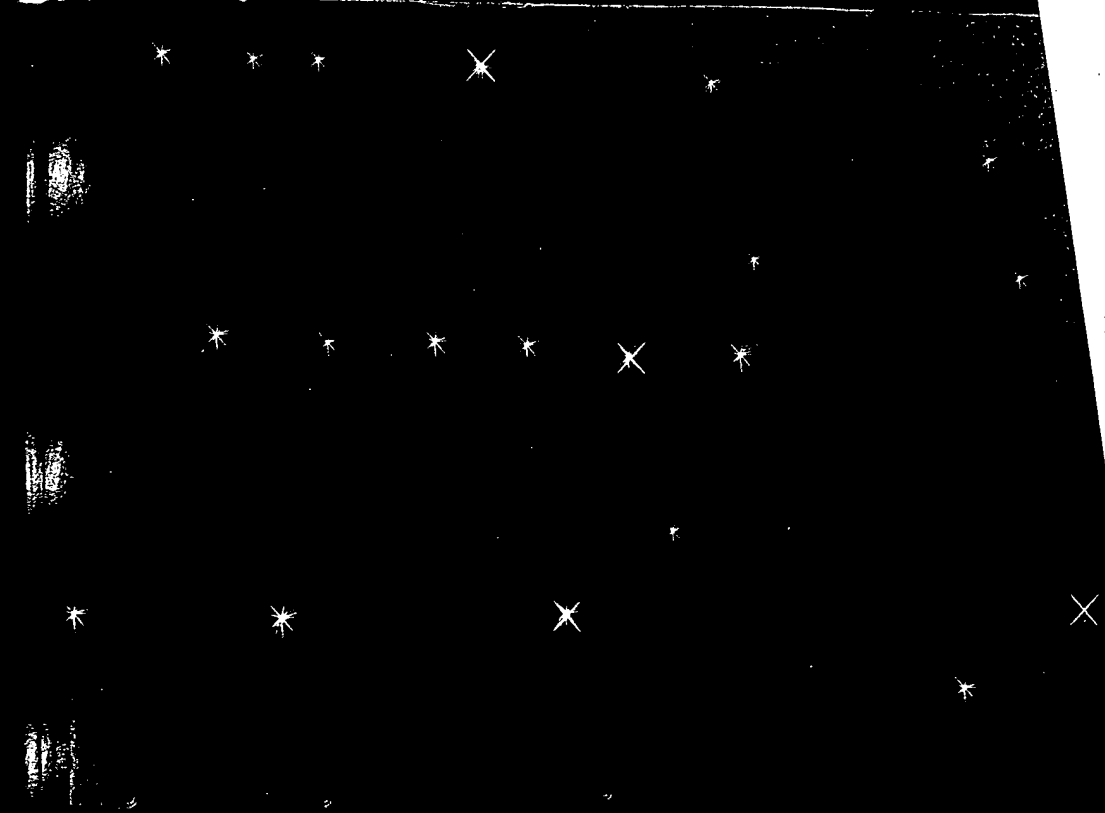

The Official Dictionary of Telecommunications

- Computer Telephony
- The Internet
- IP Telephony
- Intranets, LANs & WANs
- Windows 95, NT, NetWare & Unix Networking
- Wired & Wireless Telecommunications
- Voice Processing
- Carrier Telephony
- The Intelligent Network
- ISDN & T-1
- Voice on The Internet & Intranets

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out difficulty. QFC also establishes limits on the bandwidth available to any individual connection, thereby avoiding the potential for monopolization of the switch buffers. See also FLOW CONTROL. Compare with RATE-BASED FLOW CONTROL and ER.

QLLC Qualified Logical Link Control. Software package that allows Systems Network Architecture (SNA) commands to be transmitted over an X.25 packet data network (PDN). See also NPSI. Contrast with DSP.

QMS Queue Management System.

QNX A UNIX-like operating system that really works well for computer telephony applications.

QoR Query on Release.

QoS Quality of Service. See QUALITY OF SERVICE.

QPSK Quaternary Phase Shift Keying. A compression technique used in modems and in wireless networks, such as CDMA. A simple implementation of QPSK allows the transmission of 2 bits per symbol, with each symbol being a phase range of the sine wave. In this fashion, a 2:1 compression ratio is achieved, resulting in a doubling of the efficiency with which a circuit is employed. For instance, 0-90 degrees of phase indicates a 11 bit pattern; 90-180 degrees a 01; 180-270 a 10; and 270-360 a 00. In wireless networks, two carrier signals can be used, each of which is separated by 90 degrees of phase (position). If the phase of the carrier signals were not separated, one would be indistinguishable from the other. A 90-degree phase shift provides maximum phase separation and, therefore, maximum delineation between the carrier signals.

QPSX Queued Packet Synchronous Exchange. Medium Access Control technology developed by the University of Western Australia for use in extending the reach of LANs across a Metropolitan Area Network (MAN). The technology was licensed to QPSX, Ltd. and subsequently was standardized by the IEEE as 802.6. QPSX was commercialized by Bellcore as DQDB, which is the access technology for SMDS networks. See also DQDB and SMDS.

QRSS Quasi-Random Sequence Signals. Signals used for testing digital circuits, n particular DS-1 (i.e. T-1) circuits.

QSAM Quadrature Sideband Amplitude Modulation. A sophisticated modulation technique, using variations in signal amplitude, that allows data-encoded symbols to be represented as any of 16 or 32 different states.

QSIG An emerging signaling and control standard for PINX-to-PINX (Private Integrated Network eXchange) applications. It is intended as a global standard for use in private corporate ISDN networks. "Q" comes from the fact that the standard is an extension of the "Q" logical reference point defined by the ITU-T in its Q.93x series of recommendations for generic functions and basic services of ISDN SIGnaling systems. The early work on QSIG was accomplished by the European Computer Manufacturers Association (ECMA), which built on ITU-T ISDN standards for public networks. As a result, and for obvious reasons, QSIG, therefore, builds on the ITU-T DSS1 (Digital Subscriber Signaling 1) standard. DSS1 defines the logical reference point for ISDN at the user equipment. The impetus for this effort was that of encouraging the harmonization of existing, proprietary private network "standards" toward the reduction of technical trade barriers in the pan-European market. Subsequently, the EC (European Commission) became involved, charging ETSI (European Telecommunications Standards Institute) with the responsibility for further development and promotion of the standard in collaboration with CENELEC (translated from French as

European Electrotechnical Standards Committee). QSIG standards are submitted to the JTC1 (Joint Technical Committee 1 which is a collaboration of the ISO (International Standards Organization) and the IEC (International Electrotechnical Commission). The standards also are promoted by the IPNS (ISDN PBX Networking Specification) Forum, which comprises a number of manufacturing companies such as Alcatel, Ascom, AT&T, Ericsson, Nortel, Philips and Siemens.

QSIG is much like the public network DSS1 standard set by the ITU-T at least at Layers 1 & 2 of the OSI Reference Model. Differences appear at Layer 3, the Network Layer, as QSIG is extended for use in private networks and is symmetrical in nature, with the user side and the network side being identical. Further, QSIG is designed for peer-to-peer operation, although the standard addresses transit node capabilities, as well. QSIG also addresses both connection-oriented and connectionless services, unlike DSS1 standards which address only the former. ECMA currently is working on B-QSIG, which will extend the QSIG protocol stack to B-ISDN (Broadband ISDN). According to the IPNS Forum, QSIG offers user benefits including vendor independence, guaranteed PBX interoperability, free-form network topology, support for an unlimited number of nodes, flexible numbering plan, flexibility of interconnecting transmission technologies (i.e., analog or digital leased lines, radio and satellite links, and public VPN services). Supplementary services offered by QSIG include name identification, call intrusion, do not disturb, path replacement, operator services, mobility services, and call completion on no reply. As a standards recommendation, QSIG provides manufacturers the freedom to develop custom features, with QSIG providing a standard mechanism for transporting such non-standard features. See also CENELEC, EC, ECMA, ETSI, IEC, ISO, and OSI REFERENCE MODEL.

QTC Quick Time Conference. Apple Computer's cross-platform, video-conferencing, collaborative computing and multimedia communications technology.

QTVR See QUICKTIME VR.

Quad A slang term for cable conductor with four single, plastic coated wires not twisted together and contained in a single plastic covering. Quad wiring has been traditionally used inside houses and small offices. Since it will not handle data well, it is no longer being recommended for installation anywhere, except in single-line analog (never data) applications. In the old days, a quad wire would support two analog phone lines. Color coding in quad wire in North America is red-green, yellow-black. When I showed this definition to a professional installer, he told me that quad wire was generally not used anymore except by ignorant do-it-yourselfers, cheap telcos (telephone companies), irresponsible contractors, etc. See QUAD WIRE.

Quad Fiber Cable A cable consisting of four single optical fiber cables placed inside a polyvinyl chloride jacket with a rip cord to peel back the jacket and gain access to each single cable.

Quad Wire A type of wire which contains four untwisted copper conductors in a plastic sheath. These four conductors are not two separate twisted pairs, although the four may have a very "slow" twist to them. Quad wiring is no longer recommended by the telephone industry for installation in other than analog single line applications. In short, quad is dead. See QUAD.

Quadded Cable A cable in which at least some of the conductors are arranged in the form of a quad.

QUALDIR QUALification DIRective. A wireless term for changes to a VLR (Visitor Location Register), a database which contains information about legitimate roamers and which describes the features to which they have access. The response to the QUALDIR is a "qualdir" (lower case). See also VLR.

Quality Of Service QoS. Quality of Service is a measure of the telephone service quality provided to a subscriber. It's not easy to define "quality" of telephone service. It's very subjective. Is the call easy to hear? Is it "clear?" Is it loud enough, etc.? The state Public Service Commissions (PSCs) have attempted to define the quality of service they want the residents of their states to have. And they have created various measures to which they insist phone companies conform. They tend to be more measurable. They include the longest time someone should wait after picking up the handset before they receive dial tone (three seconds in most states).

Quality of Service is more easy to define in digital circuits, since you can assign specific error conditions and compare them. For example if you were defining QoS with respect to ATM, it would be defined on an end-to-end basis in terms of the attributes of the end-to-end ATM connection, as detailed in ITU-T Recommendation I.350. The ATM Forum extended this standard through the definition of QoS parameters and reference configurations for the User Network Interface (UNI). ATM Performance Parameters include the following:

- Cell Error Ratio (CER)
- Severely Errored Cell Block Ratio (SECBR)
- Cell Loss Ratio (CLR)Cell Misinsertion Rate (CMR)
- Cell Transfer Delay (CTD)
- Mean Cell Transfer Delay (MCTD)
- Cell Delay Variability (CDV)

ATM Quality of Service (QoS) objectives set by the carriers are defined as Class of Service 1, 2, 3, and 4. Here is an explanation of the various classes: Class 1: Equivalent to digital private lines. Class 2: Supports traffic such as audioconferencing, videoconferencing and multimedia Class 3: Addresses connection-oriented protocols such as SDLC and Frame Relay Class. 4: Supports connectionless data protocols such as SMDS.

In the middle 90s, the concept of carrying voice and video over IP (Internet Protocol) networks suddenly became very important. In a White Paper which Microsoft put out in September 1997, it discussed QoS with the following words: "What is Quality of Service? In contrast to traditional data traffic, multimedia streams, such as those used in IP Telephony or videoconferencing, may be extremely bandwidth and delay sensitive, imposing unique quality of service (QoS) demands on the underlying networks that carry them. Unfortunately, IP, with a connectionless, "best-effort" delivery model, does not guarantee delivery of packets in order, in a timely manner, or at all. In order to deploy real-time applications over IP networks with an acceptable level of quality, certain bandwidth, latency, and jitter requirements must be guaranteed, and must be met in a fashion that allows multimedia traffic to coexist with traditional data traffic on the same network.

Quantization The converting of a native analog signal to digital format through a sampling and quantizing process. This process is accomplished in a CODEC and is necessary in order to send analog data (voice or video) over a digital network (e.g., T-carrier or ATM) or through a digital switch (e.g., PBX or central office).

In the case of a voice signal and using PCM (Pulse Code Modulation), for instance, the amplitude of the native analog signal is sampled 8,000 times per second, with the each sampled amplitude value being expressed as an 8-bit digital value

do this without tying up network trunks.
One of the major advantages of TCAP is that it provides a set of protocol building blocks for use in a variety of service definitions. The TCAP building blocks are subdivided into the transaction sublayer and the component sublayer. For more on TCAP, see the 1988-3 issue of Northern Telecom's Telesis publication.

TCAS T-Carrier Administration System. Provides mechanized support for the facility maintenance and administration center to achieve centralized administration and control of the digital network.

TCF Training Check Frame. Last step in a series of signals in a fax transmission called a training sequence, designed to let the receiver adjust to telephone line conditions.

Tchotchke A New York Jewish word meaning trinkets, best exemplified by the giveaway junk we often pick up at telecommunications trade shows.

TCIF TeleCommunications Industry Forum. A voluntary special interest group under ATIS (Alliance for Telecommunications Industry Solutions). TCIF addresses areas such as electronic commerce, including bar coding and EDI (Electronic Data Interchange). www.atis.org/atis/tcif/index.html See also ATIS.

TCM 1. Traveling Class Mark.
2. Trellis Coding Modulation.
3. Time Compression Multiplexing. A digital transmission technique that permits full duplex data transmission by sending compressed bursts of data in a "ping-pong" fashion.
4. Telecommunications Manager. The TCM is the manager of the department that plans, controls, and administers the telephony and telecommunications assets of the company. He ensures that the telephone and telecommunications systems are well-run and functioning smoothly. These assets may include the PBX and ISDN, T-1, local and long distance telephone lines, telephone sets, authorization codes, cable pairs, WANs, Fax machines, voice mail systems, automated attendants, interactive voice response systems, automatic call distribution, multiplexors, modem pools, etc. The internal data facilities such as LANs and routers may be under the administration of the TCM, or could be the responsibility of the Management Information Systems (MIS) department. But since the TCM has responsibility for both the inside wiring and the outside Carrier facilities, close coordination would be required if the internal data facilities are controlled by the MIS department.
The following are the functions of the TCM;
- Operating, administering, monitoring, and maintaining the existing telecommunications systems.
- Dealing with the various vendors and providers, including verifying and paying the bills.
- Preparing and managing the Telecommunications budget.
- Keeping abreast of changes in technology, services, industry structure, and rates.
- Assisting company management in developing a corporate telecommunications policy that meets business objectives.
- Developing and implementing company telephone and telecommunications procedures for efficient and cost effective use, and training company employees in these procedures.
- Upgrading, procurement, selecting, contracting, or purchasing a system, new system, equipment, or services.
- Planning and analyzing for growth, new requirements, or future functionality.

The goal of the TCM is to provide good telecommunications services for an organization and its employees at the lowest possible cost. This definition courtesy, Robert J. Perillo, Perillo@dockmaster.ncsc.mil.

TCNS Thomas Conrad Networking System is a 100 million bit per second proprietary networking system (LAN) based on ARCnet that can use most standard ARCnet drivers on any network operating systems.

TCO Total Cost of Ownership. A term coined by The Gartner Group to bring attention to the actual, total cost to the enterprise of owning a PC. The most figure in 1997 was $29,353 for owning a standard, networked, Windows 95 PC for a period of three years. Gartner cites the cost of a NetPC (Thin Client) at a much lower cost. The point is clear and fairly obvious — consider not only the acquisition/implementation cost of a workstation (networked or not), but also consider the total cost, including administration, maintenance, support, software upgrades and training.

TCP 1. Transmission Control Protocol. ARPAnet-developed transport layer protocol. Corresponds to OSI layers 4 and 5, transport and session. TCP is a transport layer, connection-oriented, end-to-end protocol. It provides reliable, sequenced, and unduplicated delivery of bytes to a remote or local user. TCP provides reliable byte stream communication between pairs of processes in hosts attached to interconnected networks. It is the portion of the TCP/IP protocol suite that governs the exchange of sequential data. See TCP/IP for a much longer explanation.
2. An ATM term. Test Coordination Procedure: A set of rules to coordinate the test process between the lower tester and the upper tester. The purpose is to enable the lower tester to control the operation of the upper tester. These procedures may or may not, be specified in an abstract test suite.

TCP/IP According to Microsoft: Transmission Control Protocol/Internet Protocol (TCP/IP) is a networking protocol that provides communication across interconnected networks, between computers with diverse hardware architectures and various operating systems. TCP (Transmission Control Protocol) and IP (Internet Protocol) are only two protocols in the family of Internet protocols. Over time, however, "TCP/IP" has been used in industry to denote the family of common Internet protocols. The Internet protocols are a result of a Defense Advanced Research Projects Agency (DARPA) research project on network interconnection in the late 1970s. It was mandated on all United States defense long-haul networks in 1983 but was not widely accepted until the integration with 4.2 BSD (Berkeley Software Distribution) UNIX. The popularity of TCP/IP (Harry's note: it's the Internet's networking protocol) is based on:
- Robust client-server framework. TCP/IP is an excellent client-server application platform, especially in wide-area network (WAN) environments.
- Information sharing. Thousands of academic, defense, scientific, and commercial organizations share data, electronic mail and services on the connected Internet using TCP/IP.
- General availability. Implementations of TCP/IP are available on nearly every popular computer operating system. Source code is widely available for many implementations. Additionally, bridge, router and network analyzer vendors all offer support for the TCP/IP protocol family within their products.

TCP/IP is the most complete and accepted networking protocol available. Virtually all modern operating systems offer TCP/IP support, and most large networks rely on TCP/IP for all their network traffic. Microsoft TCP/IP provides cross-platform connectivity and a client-server development framework that many software vendors and corporate developers are using to develop distributed and client-server applications in heterogeneous enterprise networks over TCP/IP.

UCT Universal Coordinated Time. See ZULU TIME.
UDF Universal Disk Format. See OSTA.
UDI Unrestricted Digital Information.
UDK A dumb GTE abbreviation, for Universal Dialing Keyset, a key pad that is switchable for either TONE or PULSE dialing. Outside GTE's private world, a keyset would mean a KEY TELEPHONE, not part of a phone.
UDOP The ultimate dumb, open programmable (UDOP) switch built from multi-vendor SC-based products. A term coined by Dialogic.
UDP User Datagram Protocol. A TCP/IP protocol describing how messages reach application programs within a destination computer. This protocol is normally bundled with IP-layer software. UDP is a transport layer, connectionless mode protocol, providing a (potentially unreliable, unsequenced, and/or duplicated) datagram mode of communication for delivery of packets to a remote or local user.
UDP/IP User Datagram Protocol/Internet Protocol. See UDP.
UDSL Unidirectional HDSL (High-bit-rate Digital Subscriber Line). A variation on the HDSL theme proposed by a small group of companies in Europe. See HDSL and xDSL.
UEM Universal Equipment Module. A Northern Telecom acronym. The basic unit of Meridian 1 PBX modular packaging. A UEM is a self-contained hardware cabinet housing a card cage, with a power supply, backplane, and circuit cards. If the UEM has the card cage for an AEM installed, it functions as an AEM.
UFGATE A program which enables a FIDO compatible bulletin board system to exchange UUCP mail with UUCP sites.
UG UnderGround.
UHF The Ultra High Frequency part of the radio frequency spectrum ranging between 300 Megahertz and 3 Gigahertz.
UI 1. User Interface, as in GUI, or Graphical User Interface. 2. UNIX International is a consortium of computer hardware and software vendors which is interested in the development of open software standards for the UNIX industry. Prominent members include AT&T, Sun, UNISYS and Fujitsu.
UIFN Universal International Freephone Number. In early June 1996, the ITU-T released its approval of a new standard, called E.169. This standard will allow International Freephone Service customers to be allocated a unique Universal International Freephone Number (UIFN) which will remain the same throughout the world, regardless of country or telecommunications carrier. "Freephone" is a service which permits the cost of a telephone call to be charged to the called party, rather than the calling party. In North America, 800 and 888 numbers are "freephone"-numbers. According to the ITU-T, a UIFN is composed of a three digit country code for global service application, 800, and an 8-digit Global Subscriber Number (GSN), resulting in an eleven digit fixed format, which allows companies to choose the digits they wish and embed existing freephone numbers into the available number space.
UIS Universal Information Services. AT&T's vision of a single fully-integrated, user-defined digital network with a universal port of entry. Very similar to ISDN, now aggressively adopted by AT&T.
Uiterbi Decoder Algorithm for decoding Trellis encoded signals.
UKERNA UK Education and Research Networking Association. See JANET, Super-JANET.
UL Underwriters Laboratories, a privately-owned company that charges manufacturers a stiff fee to make sure their products meet the safety standards which UL itself develops. A UL label on a product has a very specific message: product confirms to the safety standards UL has de nothing more. It does not affirm that the product w is now beginning to concern itself with adopting a gating standards (which have nothing to do with dards) including those relating to cabling. See UL UL CABLE CERTIFICATION PROGRAM and UL NN
UL 1449 A method of rating and approving surg sors. This Underwriters Laboratories measuremen tant as it tells if you're buying a true surge suppre an extension cord. This listing measures how mu actually reaches the attached equipment after goi the surge suppressor. It's on a scale from about 3 6,000 volts. The lower the rating, the greater the Decent surge suppressors tend to be raled aroun for the basic units and 340 for the advanced an models. In short, check for UL 1449 rating on arrestor before you buy it.
UL 1459 Effective 7/1/91, telephone equipment turers will be required to provide protection fr overloads and power line crosses on equipmen Equipment systems covered under this listing re include single- and multi-line telephones, PBXs, ke and central office switches. In general, the UL 145 ments apply to any location where wires enter a bui the public network, as well as in most IROB (In Ra Building) situations. See also NEC REQUIREM UNDERWRITERS LABORATORIES.
UL 1863 This requirement covers miscellaneo sories intended to be electrically connected to the munications network. The listing requirement appli ponents that comprise the premises communicati system from the point of demarcation up to and inc final outlet providing modular plug and jack conn equivalent). Requirements are listed under Comm Circuit Accessories, UL 1863. Listing equipment fo equipment will be covered under UL 1459, effecti 1991. See also NEC REQUIREMENTS and UNDER LABORATORIES.
UL 497 & 497A According to the National Electr primary and secondary protection systems that will b a telephone circuit must be listed for that purpose. requirements are UL 497 for primary protection sy UL 497A for secondary protection systems. See REQUIREMENTS and UNDERWRITERS LABORATOR
UL Approved Tested and approved by the Un Laboratories. The Underwriters Laboratories, Inc. w lished by the National Board of Fire Underwrite equipment affecting insurance risks of fire and saf phone systems are tested and approved. Most of t focuses on the power supply feeding the phone sy power supply is that little black box that plugs into th outlet at one end, takes 120 volt AC and converts voltage DC power that the phone system typically n the power supply tests OK, then that's usually suf testing. For it is the power supply — and what happ commercial AC power that feeds into the power s that determines the potential fire hazard of your ph tem. After many fire deaths in recent years, most to munities are a lot more concerned about UL Ap installed telephone equipment. Fire departments h known to zealously enforce these rules. In addition approval, the other major fire concern is the use wire in new building construction, with especial emp